

The State of New Hampshire

Department of Environmental Services



Michael P. Nolin Commissioner

January 28, 2004 **Letter of Deficiency** DSP#04-011

Mr. Jim Stone Superintendent Hanover Water Works Box 1006 Hanover, NH 03755

RE: Lower Reservoir Dam #108.05, Hanover

Dear Mr. Stone:

The Department of Environmental Services, Dam Bureau (DES) consistently strives to enhance the safety of dams in New Hampshire through its dam safety program. One of the many instruments that play a part in reaching this goal is our inspection program. DES is forwarding this correspondence to you to advise you that in accordance with RSA 482:12 and Env-Wr 502.02, an inspection of the subject dam was conducted on October 16, 2003. During this visual inspection and/or file review, the following deficiencies were observed:

- 1. There was minor cracking at the left upstream training/retaining wall to the overflow spillway;
- 2. There was significant separation (1") and settlement at a joint between a cast in place section of newer concrete and old concrete at the right upstream training/retaining wall. It appears that the new section of concrete was not constructed with dowels or water stop, which may have contributed to the separation and settlement; and
- 3. There was slight seepage and efflorescent buildup at the historic crack between the downstream right training wall and the ogee spillway concrete apron.

DES believes that the above deficiencies can be corrected by performing the following items by the indicated schedule:

August 30, 2004:

1. Repair the significant separation (1") and settlement at a joint between a cast in place section of newer concrete and old concrete at the right upstream training/retaining wall with proper construction techniques;

On a continuing basis:

- 2. Monitor and repair as necessary the minor cracking and spalling concrete spillway walls; and
- 3. Monitor the seepage at the base of the right downstream training wall and repair as necessary.

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DES is requesting that you complete and submit the attached "Intent to Complete Repairs" form, within 30 days of receipt of this letter, that will provide for correction of the identified deficiencies by the date(s) indicated above. Please call or write to our office if the repairs are completed ahead of the aforementioned schedule so that DES may schedule a follow-up inspection. Unless notified otherwise, DES will conduct the follow-up inspection on or after the date(s) indicated above. If you believe changes to the items of work or dates are necessary, please make the changes directly on the form and provide a brief explanation. We have enclosed a self addressed stamped envelope for you to return this form.

DES would like to remind you that an update and test of your Emergency Action Plan (EAP) is due January 2004. If you have any questions relative to updating or testing your EAP please contact Bethann McCarthy, P.E., at 271-3406.

Our intent in sending you this correspondence is to make you aware of items that DES believes warrant your attention to insure the continued safe operation of your dam. It is our hope that, through the submittal of the attached form and a commitment to keeping a well-maintained dam, you will voluntarily comply with the requested items of work. If we do not receive the intent form or a similarly adequate written reply, we will assume that you are in agreement with our findings and recommendations and DES will carry out follow-up inspections accordingly.

If you have any questions or comments regarding this Letter of Deficiency or would like to be present at future inspections, please contact me at 271-3406, or write to the Water Division at the address listed on the bottom of the cover page.

Sincerely,

Dale F. Guinn, P.E. Dam Safety Engineer

Attachments DB13 cc: Gretchen Rule Town of Hanover

Bethann McCarthy, P.E., EAP Coordinator

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